

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Date of issue: 30/06/2011 Revision date: 08/10/2019

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Supersedes: 18/01/2016

Version: 2.1

_M-6807	

	the substance/mixture and of the company/undertaking
1.1. Product identifier	
Product form	: Substance
Substance name	: L-ISOLEUCINE (U-13C6, 97-99%; U-D10, 97-99%; 15N, 97-99%)
EC-No.	: 200-798-2 (Unlabeled)
CAS-No.	: 73-32-5 (Unlabeled)
Product code	: CDNLM-6807
Formula	: *CD3*CD2*CD(*CD3)*CD(*NH2)*COOH
Synonyms	: (2S,3S)-2-Amino-3-methylpentanoic acid
1.2. Relevant identified uses of	the substance or mixture and uses advised against
1.2.1. Relevant identified uses	
Main use category	: Professional use
Industrial/Professional use spec	: For professional use only
No additional information available 1.3. Details of the supplier of the Cambridge Isotope Laboratories, Inc. 50 Frontage Road Andover, MA 01810	e safety data sheet
USA USA: 1-800-322-1174 Int: 1-978-749 <u>cilsales@isotope.com</u> www.isotope.c	com
Emergency telephone num	ber
Emergency numbers: Chemtrec: 1-800-424-9300 (24 hours) International: 1-703-741-5970 (24 hou	
	ation
SECTION 2: Hazards identific	
2.1. Classification of the substa Classification according to Regulation	ance or mixture
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Classification according to Regulation	ance or mixture on (EC) No. 1272/2008 [CLP]

2.2. Label elements

Labeling according to Regulation (EC) No. 1272/2008 [CLP] No labeling applicable

GHS-US labeling

No labeling applicable

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2.3. **Other hazards**

No additional information available

SECTION 3: Composition/Information on ingredients

3.1. Substances					
Name	Product identifier	%	Classification according to Directive 67/548/EEC		
L-ISOLEUCINE (U-13C6, 97-99%; U-D10, 97-99%; 15N, 97- 99%)	(CAS-No.) 73-32-5 (Unlabeled) (EC-No.) 200-798-2 (Unlabeled)	100	Not classified		
Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]		

Full text of R- and H- phrases: see section 16

Name	Product identifier	%	GHS-US classification
L-ISOLEUCINE (U-13C6, 97-99%; U-D10, 97-99%; 15N, 97- 99%) (Main constituent)	(CAS-No.) 73-32-5 (Unlabeled)	100	Not classified

Full text of H-phrases: see section 16

3.2. Mixtures	
Not applicable	
SECTION 4: First aid measures	
4.1. Description of first aid measures	
First-aid measures general	: Move out of dangerous area. Consult a physician and show this safety data sheet.
First-aid measures after inhalation	: If breathed in, move person to fresh air. If not breathing, give artificial respiration. Consult a physician.
First-aid measures after skin contact	: Wash with soap and plenty of water. Consult a physician.
First-aid measures after eye contact	: Flush eyes with water as a precaution.
First-aid measures after ingestion	: Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
4.2. Most important symptoms and effe	cts, both acute and delayed
Symptoms/effects	: Not available.
Symptoms/effects after inhalation	: May be harmful if inhaled. May cause respiratory tract irritation.
Symptoms/effects after skin contact	: May be harmful if absorbed through skin. May cause skin irritation.
Symptoms/effects after eye contact	: May cause eye irritation.
Symptoms/effects after ingestion	: May be harmful if swallowed.
4.3. Indication of any immediate medica	I attention and special treatment needed
No additional information available	
SECTION 5: Firefighting measures	
5.1. Extinguishing media	
Suitable extinguishing media	: Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide.
5.2. Special hazards arising from the su	bstance or mixture
No additional information available	
5.3. Advice for firefighters	
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.
SECTION 6: Accidental release mea	sures
6.1. Personal precautions, protective ed	uipment and emergency procedures
6.1.1. For non-emergency personnel	
Emergency procedures	: Avoid dust formation.
6.1.2. For emergency responders	
No additional information available	
6.2. Environmental precautions	
Prevent entry to sewers and public waters.	
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Viscosity, kinematic : No data available	Auto-ignition temperature Decomposition temperature Flammability (solid, gas) Vapor pressure Relative vapor density at 20 °C Relative density	 No data available 	
	Auto-ignition temperature Decomposition temperature Flammability (solid, gas) Vapor pressure Relative vapor density at 20 °C Relative density Solubility	 No data available Water: 34 g/l 	
Viscosity, dynamic : No data available	Auto-ignition temperature Decomposition temperature Flammability (solid, gas) Vapor pressure Relative vapor density at 20 °C Relative density Solubility Log Pow	 No data available Vater: 34 g/l -1.58 	
	Auto-ignition temperature Decomposition temperature Flammability (solid, gas) Vapor pressure Relative vapor density at 20 °C Relative density Solubility Log Pow Log Kow	 No data available Vater: 34 g/l -1.58 No data available 	
Explosive properties : No data available	Auto-ignition temperature Decomposition temperature Flammability (solid, gas) Vapor pressure Relative vapor density at 20 °C Relative density Solubility Log Pow Log Kow Viscosity, kinematic	 No data available Vater: 34 g/l -1.58 No data available No data available No data available No data available 	

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Oxidizing properties	: No data available
Explosion limits	: No data available
9.2. Other information	
No additional information available	
SECTION 10: Stability and reactivity	
10.1. Reactivity	
No additional information available	
10.2. Chemical stability	
Stable if stored under recommended conditions.	
10.3. Possibility of hazardous reactions	
No additional information available	
10.4. Conditions to avoid	
No additional information available	
10.5. Incompatible materials	
Strong oxidizing agents.	
10.6. Hazardous decomposition products	\$
Formed under fire conditions: Carbon oxides, ni	rogen oxides (NOx).
SECTION 11: Toxicological information	ion
SECTION IT. TOXICOlOGICALIMOLIMA	
11.1. Information on toxicological effects	
11.1. Information on toxicological effects Acute toxicity	: Not classified
11.1. Information on toxicological effects	i de la construcción de la constru
11.1. Information on toxicological effects Acute toxicity Skin corrosion/irritation	: Not classified : Not classified
11.1. Information on toxicological effects Acute toxicity Skin corrosion/irritation Serious eye damage/irritation	 Not classified Not classified Not classified
11.1.Information on toxicological effectsAcute toxicitySkin corrosion/irritationSerious eye damage/irritationRespiratory or skin sensitization	 Not classified Not classified Not classified Not classified Not classified
11.1. Information on toxicological effects Acute toxicity Skin corrosion/irritation Serious eye damage/irritation Respiratory or skin sensitization Germ cell mutagenicity	 Not classified Not classified Not classified Not classified Not classified Not classified
11.1.Information on toxicological effectsAcute toxicitySkin corrosion/irritationSerious eye damage/irritationRespiratory or skin sensitizationGerm cell mutagenicityCarcinogenicity	 Not classified
11.1.Information on toxicological effectsAcute toxicitySkin corrosion/irritationSerious eye damage/irritationRespiratory or skin sensitizationGerm cell mutagenicityCarcinogenicityReproductive toxicity	 Not classified
11.1.Information on toxicological effectsAcute toxicitySkin corrosion/irritationSerious eye damage/irritationRespiratory or skin sensitizationGerm cell mutagenicityCarcinogenicityReproductive toxicitySpecific target organ toxicity – single exposureSpecific target organ toxicity – repeated	 Not classified
11.1. Information on toxicological effects Acute toxicity Skin corrosion/irritation Serious eye damage/irritation Respiratory or skin sensitization Germ cell mutagenicity Carcinogenicity Reproductive toxicity Specific target organ toxicity – single exposure Specific target organ toxicity – repeated exposure	 Not classified
11.1.Information on toxicological effectsAcute toxicitySkin corrosion/irritationSerious eye damage/irritationRespiratory or skin sensitizationGerm cell mutagenicityCarcinogenicityReproductive toxicitySpecific target organ toxicity – single exposureSpecific target organ toxicity – repeatedexposureAspiration hazardPotential Adverse human health effects and	 Not classified The chemical, physical, and toxicological properties have not been thoroughly investigated. The levorotary (I) forms of leucine, isoleucine, and valine have been found to have tumor-promoting
11.1. Information on toxicological effects Acute toxicity Skin corrosion/irritation Serious eye damage/irritation Respiratory or skin sensitization Germ cell mutagenicity Carcinogenicity Reproductive toxicity Specific target organ toxicity – single exposure Specific target organ toxicity – repeated exposure Aspiration hazard Potential Adverse human health effects and symptoms	 Not classified The chemical, physical, and toxicological properties have not been thoroughly investigated. The levorotary (I) forms of leucine, isoleucine, and valine have been found to have tumor-promoting activity for bladdar carcinomas.
11.1.Information on toxicological effectsAcute toxicitySkin corrosion/irritationSerious eye damage/irritationRespiratory or skin sensitizationGerm cell mutagenicityCarcinogenicityReproductive toxicitySpecific target organ toxicity – single exposureSpecific target organ toxicity – repeatedexposureAspiration hazardPotential Adverse human health effects andSymptoms/effects after inhalation	 Not classified The chemical, physical, and toxicological properties have not been thoroughly investigated. The levorotary (I) forms of leucine, isoleucine, and valine have been found to have tumor-promoting activity for bladdar carcinomas. May be harmful if inhaled. May cause respiratory tract irritation.

SECT	SECTION 12: Ecological information				
12.1.	Toxicity				
No addi	tional information available				
12.2.	Persistence and degradability				
No addi	tional information available				
12.3.	Bioaccumulative potential				
L-ISO	LEUCINE (U-13C6, 97-99%; U-D10, 97-99	ł%; 15N, 97-99%) (73-32-5 (Unlabeled))			
Log Po	wc	-1.58			
12.4.	Mobility in soil				
No additional information available					
12.5.	Results of PBT and vPvB assessment	t .			

No additional information available

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12.6.	Other adverse effects		
No addi	tional information available		
SECT	ION 13: Disposal consideration	S	
13.1.	Waste treatment methods		
Regiona	al legislation (waste)	:	Waste materials should be disposed of under conditions which meet Federal, State, and local environmental control regulations.
SECT	ION 14: Transport information		
In acco	rdance with ADR / RID / IMDG / IATA / AE	DΝ	
14.1.	UN number		
Not app	licable		
14.2.	UN proper shipping name		
Not app	licable		
14.3.	Additional information		
Other in	ofrmation	:	No supplementary information available.
Special	transport precautions	:	Not dangerous goods.
Overlar	nd transport		
No addi	itional information available		
Transp	ort by sea		
No addi	itional information available		
Air tran	Isport		
No addi	tional information available		
14.4.	Environmental hazards		
Other in	formation	:	No supplementary information available.
14.5.	Special precautions for user		
Special	transport precautions	:	Not dangerous goods.
14.6	Transport in bulk according to Anne	v I	of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information			
15.1. US Federal regulations			
L-ISOLEUCINE (U-13C6, 97-99%; U-D10, 97-99	%; 15N, 97-99%) (73-32-5 (Unlabeled))		
SARA Section 302 Threshold Planning Quantity (TPQ)	Not subject to reporting requirements of the United States SARA Section 302		
SARA Section 313 - Emission Reporting	Not subject to reporting requirements of the United States SARA Section 313		

15.2. International regulations

CANADA

L-ISOLEUCINE (U-13C6, 97-99%; U-D10, 97-99%; 15N, 97-99%) (73-32-5 (Unlabeled))
Listed on the Canadian DSL (Domestic Substances List)

15.2.1. **National regulations**

No additional information available

15.3. US State regulations

L-ISOLEUCINE (U-13C6, 97-99%; U-D10, 97-99%; 15N, 97-99%)(73-32-5 (Unlabeled))				
U.S California - Proposition 65 - Carcinogens List	No			
U.S California - Proposition 65 - Developmental	No			
09/40/2040 EN /F		~		

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L-ISOLEUCINE (U-13C6, 97-99%; U-D10, 97-99%; 15N, 97-99%)(73-32-5 (Unlabeled))	
Toxicity	
U.S California - Proposition 65 - Reproductive Toxicity - Female	No
U.S California - Proposition 65 - Reproductive Toxicity - Male	No
State or local regulations	U.S Pennsylvania - RTK (Right to Know) List U.S New Jersey - Right to Know Hazardous Substance List

SECTION 16: Other information

NFPA health hazard	: 0 - Materials that, under emergency conditions, would offer no hazard beyond that of ordinary combustible materials.
NFPA fire hazard	 O - Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.
NFPA reactivity	: 0 - Material that in themselves are normally stable, even under fire conditions.
Hazard Rating	
Health	: 0 Minimal Hazard - No significant risk to health
Flammability	: 0 Minimal Hazard
Physical	: 0 Minimal Hazard

CIL Substance SDS

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product